



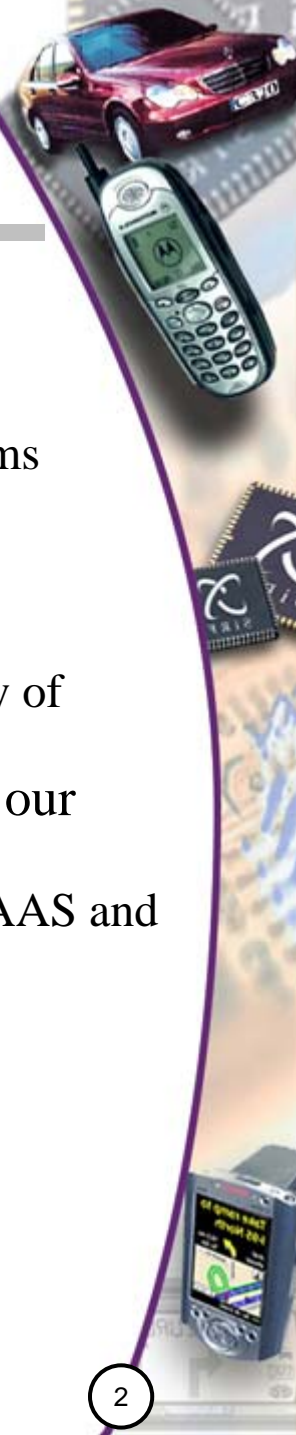
Leadership in Location Technology

GNSS Status and Plans
46th CGSIC – Greg Turetzky



Who are we?

- SiRF is an industry leader in GPS technology
 - We sell more than 1M GPS chipsets every month
 - Leading supplier into automotive, consumer and wireless platforms
 - Key customers include Motorola, Garmin, and TomTom
- SiRF is more than a GPS company
 - We supply location-enabling technology to consumers
 - We support satellite systems, terrestrial systems and a broad array of sensors
- We strongly support all GNSS systems that provide benefit to our customers
 - SiRFstarII was the first chipset to provide built-in support for WAAS and EGNOS to the consumer market
 - SiRFstarIII continues to support both systems
 - SiRF has been very active in Galileo with a focus on consumers
- SiRF will continue to lead the industry in bringing new GNSS technologies to the consumer market



PNT Value Proposition for Consumers

- More satellites means more coverage and better accuracy
 - Coverage (fix density) is more important than accuracy
- New satellites means new capabilities
 - Higher transmit power, better coding schemes, new signals
 - Good marketing stuff
- New Systems build on existing GPS sockets
 - Few new brand consumer markets/segments
 - Regional augmentation systems create local opportunity
 - Ability to rollout Galileo quickly to huge base and “upsell” value added signals
- Very bullish on Galileo
 - Need to resolve key technical, IPR and business issue quickly

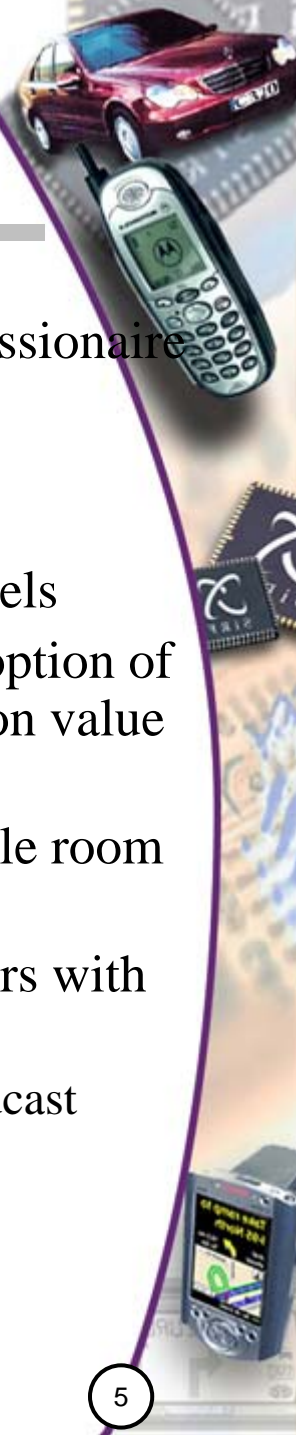
GPS Modernization Plans

- High quality infrastructure is a key to receiver business
 - Same for cell phones, broadcast television or even railroads
 - LAII was a good example of the government doing good for users
 - L2 and L5 have great promise for consumers as well but
 - When?
- Current “launch on replenishment” strategy about to clash with “world class PNT”
 - Need the best spacecraft we have in orbit, not in the hangar
- SiRF’s current belief is that consumers will remain single frequency
 - Accuracy increase is not worth additional hardware cost or size
 - Not silicon but ceramic and quartz: antenna and filter
 - Consumers want more coverage and lower power
 - More signal strength and better coding schemes
 - L5 looks like the future sweet spot
- Schedule certainty at least 12 months in the future is the key
 - Very difficult for government entities
 - Without it, difficult for corporations to provide quarterly financial outlook
 - Knowing when to invest is the key to appropriate payback



Leading US Player in Galileo for Consumers

- SiRF was the only US company involved in the Galileo concessionaire consortiums
 - We were part of the now merged iNavSat group
 - Provided technical and business expertise on mass market requirements for Galileo signal structure and business models
 - Basic tenant: A completely FREE signal will speed the adoption of Galileo and provide better opportunity for making money on value added signals
 - As chipset prices move below \$10 and head for <\$5 little room for royalty
- We expect to lead development of mass market GNSS receivers with Galileo support
 - In conjunction with Stanford, we were tracking on day 1 of broadcast
 - Decoded the signal structure and were tracking the next day
 - Performed extensive analysis on the proposed codes in the ICD



Current Galileo Concerns

- Ensure a level playing field
 - Access - All companies should have equal access to the key specifications for broadcast signal structures
 - Needs to be complete and timely
 - Licensing – Terms should be consistent
 - Easy answer: don't have any for open service
 - Need to have a framework NOW
 - Current specification has some very worrisome language relative to intellectual property in the “introduction”
 - Innovation – We all rely on being able to make a profit from our strengths
- Competition is a good thing

Conclusions

- A stable, well maintained infrastructure is the key to any commercial receiver business
- License free access promotes adoption
 - High adoption rates allow value added differentiation
- Level playing field is the key to beneficial competition
- SiRF intends to maintain leadership in consumer GNSS technology and products

